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(54) Title: RETARDATION OF CRYSTALLIZATION IN OLIGOMERIC PHOSPHATE COMPOSITIONS

(57) Abstract: Storing, for a period of time, of a blend comprising an arylene-bridged oligomeric phosphate composition and an effective amount of an alkylene-bridged bisphosphate results in a retardation of crystallization as compared to storage of a composition comprising the arylene-bridged oligomeric phosphate composition without also containing the alkylenebridged bisphosphate.

WO 2004/039818 A1

## INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07F9/12 C09K21/12 C08K5/52

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, Y	WO 96/11996 A (AKZO NOBEL NV ;BRIGHT DANIELLE A (US); AARONSON ALAN M (US); PIRRE) 25 April 1996 (1996-04-25) cited in the application abstract table page 1, line 20 - line 24 page 2, line 31-35 page 3, line 12-18 claim 1 ---	1-5
Y	US 6 319 432 B1 (KLOBUCAR W DIRK ET AL) 20 November 2001 (2001-11-20) cited in the application column 1, line 67 -column 2, line 32 --- -/--	1-5

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 750 756 A (BRIGHT DANIELLE A ET AL) 12 May 1998 (1998-05-12) examples 1-7 ---	1-5
A	WO 96/11977 A (AKZO NOBEL NV ;BRIGHT DANIELLE A (US); MOY PAUL Y (US)) 25 April 1996 (1996-04-25) cited in the application the whole document -----	1-5

## INTERNATIONAL SEARCH REPORT

PCT/US 03/34038

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9611996	A	25-04-1996	WO 9611996 A1	25-04-1996
US 6319432	B1	20-11-2001	CN 1355808 T	26-06-2002
			EP 1194435 A1	10-04-2002
			JP 2003502451 T	21-01-2003
			WO 0077012 A1	21-12-2000
US 5750756	A	12-05-1998	US 6136997 A	24-10-2000
			DE 69709871 D1	28-02-2002
			DE 69709871 T2	06-06-2002
			WO 9804566 A1	05-02-1998
			EP 0915891 A1	19-05-1999
			JP 2000516587 T	12-12-2000
			CN 1167488 A ,B	10-12-1997
			DE 69530503 D1	28-05-2003
			DE 69530503 T2	29-01-2004
			EP 0789703 A1	20-08-1997
			JP 10508021 T	04-08-1998
			WO 9613508 A1	09-05-1996
WO 9611977	A	25-04-1996	CA 2202164 A1	25-04-1996
			EP 0785966 A1	30-07-1997
			JP 10507472 T	21-07-1998
			JP 3405543 B2	12-05-2003
			WO 9611977 A1	25-04-1996